What Is Claimed Is:

1   1.   A method for manipulating a window within a three-dimensional

2   (3D) display model, comprising:

3   displaying a view into the 3D display model through a two-dimensional

4   (2D) display;

5   receiving a command to manipulate the window within the 3D display

6   model, wherein the window provides a 2D user interface for a 2D application; and

7   in response to the command, manipulating the window within the 3D

8   display model so that the manipulation is visible within the 2D display.

1   2.   The method of claim 1, wherein if the command moves the

2   window in close proximity to an edge of the 2D display, the method further

3   comprises tilting the window so that the window appears at an oblique angle in

4   the 2D display, whereby the contents of the window remain visible, while the

5   window occupies less space in the 2D display and is less likely to overlap other

6   windows.

1   3.   The method of claim 2, wherein if the window is selected, the

2   method further comprises untilting the window so that the window is parallel with

3   the 2D display.

1   4.   The method of claim 1, wherein if the command rotates the

2   window so that the backside of the window is visible, the method further

3   comprises displaying information associated with the 2D application on the

4   backside of the window.

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1   5.   The method of claim 4, wherein the information associated with

2   the 2D application can include:

3   application version information;

4   application settings;

5   application parameters;

6   application properties; and

7   notes associated with a file or a web page that is displayed in the window.

1   6.   The method of claim 4, wherein the backside of the window can

2   accept user input, including change settings, parameters, properties and/or notes.

1   7.   The method of claim 1, wherein if the command is to minimize the

2   window, manipulating the window involves:

3   tilting the window so that a spine located on a side edge of the window is

4   visible and the contents of the window remains visible, wherein the spine contains

5   identification information for the window; and

6   moving the minimized window to an edge of the 2D display;

7   wherein the operations of turning and moving the window are animated as

8   a continuous motion.

1   8.   The method of claim 1, further comprising:

2   receiving a predefined gesture through a pointing device, and

3   in response to the predefined gesture, minimizing a top-level window in

4   the 2D display, whereby repeating the predefined gesture causes subsequent top-

5   level windows to be minimized.

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1   9.   The method of claim 8, wherein upon receiving a window

2   restoration command, the method further comprises restoring minimized windows

3   to their expanded state.

1   10.   The method of claim 1, wherein if the command is entered through

2   a pointing device and the command throws the window by moving the window

3   quickly and releasing it, the method further comprises throwing the window by

4   moving the window in a continuous animated motion.

1   11.   The method of claim 10, wherein throwing the window can

2   involve:

3   locating the window farther from the viewpoint;

4   scaling down the size of the window;

5   iconizing the window; and

6   deleting the window.

1   12.   The method of claim 1, wherein receiving the command involves:

2   rotating the window so that window controls on the edge of the window

3   become visible in response to a cursor moving close to an edge of a window;

4   receiving the command through a window control; and

5   rotating the window back to its original orientation.

1   13.   A computer-readable storage medium storing instructions that

2   when executed by a computer cause the computer to perform a method for

3   manipulating a window within a three-dimensional (3D) display model, the

4   method comprising:

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5   displaying a view into the 3D display model through a two-dimensional

6   (2D) display;

7   receiving a command to manipulate the window within the 3D display

8   model, wherein the window provides a 2D user interface for a 2D application; and

9   in response to the command, manipulating the window within the 3D

10   display model so that the manipulation is visible within the 2D display.

1   14.   The computer-readable storage medium of claim 13, wherein if the

2   command moves the window in close proximity to an edge of the 2D display, the

3   method further comprises tilting the window so that the window appears at an

4   oblique angle in the 2D display, whereby the contents of the window remain

5   visible, while the window occupies less space in the 2D display and is less likely

6   to overlap other windows.

1   15.   The computer-readable storage medium of claim 14, wherein if the

2   window is selected, the method further comprises untilting the window so that the

3   window is parallel with the 2D display.

1   16.   The computer-readable storage medium of claim 13, wherein if the

2   command rotates the window so that the backside of the window is visible, the

3   method further comprises displaying information associated with the 2D

4   application on the backside of the window.

1   17.   The computer-readable storage medium of claim 16, wherein the

2   information associated with the 2D application can include:

3   application version information;

4   application settings;

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5   application parameters;

6   application properties; and

7   notes associated with a file or a web page that is displayed in the window.

1   18.   The computer-readable storage medium of claim 16, wherein the

2   backside of the window can accept user input, including change settings,

3   parameters, properties and/or notes.

1   19.   The computer-readable storage medium of claim 13, wherein if the

2   command is to minimize the window, manipulating the window involves:

3   tilting the window so that a spine located on a side edge of the window is

4   visible and the contents of the window remains visible, wherein the spine contains

5   identification information for the window; and

6   moving the minimized window to an edge of the 2D display;

7   wherein the operations of turning and moving the window are animated as

8   a continuous motion.

1   20.   The computer-readable storage medium of claim 13, wherein the

2   method further comprises:

3   receiving a predefined gesture through a pointing device, and

4   in response to the predefined gesture, minimizing a top-level window in

5   the 2D display, whereby repeating the predefined gesture causes subsequent top-

6   level windows to be minimized.

1   21.   The computer-readable storage medium of claim 20, wherein upon

2   receiving a window restoration command, the method further comprises restoring

3   minimized windows to their expanded state.

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1   22.   The computer-readable storage medium of claim 13, wherein if the

2   command is entered through a pointing device and the command throws the

3   window by moving the window quickly and releasing it, the method further

4   comprises throwing the window by moving the window in a continuous animated

5   motion.

1   23.   The computer-readable storage medium of claim 22, wherein

2   throwing the window can involve:

3   locating the window farther from the viewpoint;

4   scaling down the size of the window;

5   iconizing the window; and

6   deleting the window.

1   24.   The computer-readable storage medium of claim 13, wherein

2   receiving the command involves:

3   rotating the window so that window controls on the edge of the window

4   become visible in response to a cursor moving close to an edge of a window;

5   receiving the command through a window control; and

6   rotating the window back to its original orientation.

1   25.   An apparatus that manipulates a window within a three-

2   dimensional (3D) display model, comprising:

3   a two-dimensional (2D) display configured to display a view into the 3D

4   display model;

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5   a window manipulation mechanism configured to receive a command to

6   manipulate the window within the 3D display model, wherein the window

7   provides a 2D user interface for a 2D application; and

8   wherein in response to the command, the window manipulation

9   mechanism is configured to manipulate the window within the 3D display model

10   so that the manipulation is visible within the 2D display.

1   26.   The apparatus of claim 25, wherein if the command moves the

2   window in close proximity to an edge of the 2D display, the window manipulation

3   mechanism is configured to tilt the window so that the window appears at an

4   oblique angle in the 2D display, whereby the contents of the window remain

5   visible, while the window occupies less space in the 2D display and is less likely

6   to overlap other windows.

1   27.   The apparatus of claim 26, wherein if the window is selected, the

2   window manipulation mechanism is configured to untilt the window so that the

3   window is parallel with the 2D display.

1   28.   The apparatus of claim 25, wherein if the command rotates the

2   window so that the backside of the window is visible, the window manipulation

3   mechanism is configured to display information associated with the 2D

4   application on the backside of the window.

1   29.   The apparatus of claim 28, wherein the information associated with

2   the 2D application can include:

3   application version information;

4   application settings;

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5   application parameters;

6   application properties; and

7   notes associated with a file or a web page that is displayed in the window.

1   30.   The apparatus of claim 28, wherein the backside of the window can

2   accept user input, including change settings, parameters, properties and/or notes.

1   31.   The apparatus of claim 25, wherein if the command is to minimize

2   the window, the window manipulation mechanism is configured to:

3   tilt the window so that a spine located on a side edge of the window is

4   visible and the contents of the window remains visible, wherein the spine contains

5   identification information for the window; and to

6   move the minimized window to an edge of the 2D display;

7   wherein the operations of turning and moving the window are animated as

8   a continuous motion.

1   32.   The apparatus of claim 25, wherein the window manipulation

2   mechanism is additionally configured to:

3   receive a predefined gesture through a pointing device, and

4   in response to the predefined gesture, to minimize a top-level window in

5   the 2D display, whereby repeating the predefined gesture causes subsequent top-

6   level windows to be minimized.

1   33.   The apparatus of claim 32, wherein upon receiving a window

2   restoration command, the window manipulation mechanism is configured to

3   restore minimized windows to their expanded state.

1   34.   The apparatus of claim 25, wherein if the command is entered

2   through a pointing device and the command throws the window by moving the

3   window quickly and releasing it, the window manipulation mechanism is

4   configured to throw the window by moving the window in a continuous animated

5   motion.

1   35.   The apparatus of claim 34, wherein throwing the window can

2   involve:

3   locating the window farther from the viewpoint;

4   scaling down the size of the window;

5   iconizing the window; and

6   deleting the window.

1   36.   The apparatus of claim 25, wherein while receiving the command,

2   the window manipulation mechanism is configured to:

3   rotate the window so that window controls on the edge of the window

4   become visible in response to a cursor moving close to an edge of a window;

5   receive the command through a window control; and to

6   rotate the window back to its original orientation.

1   37.   A means for manipulating a window within a three-dimensional

2   (3D) display model, comprising:

3   a two-dimensional (2D) display means for displaying a view into the 3D

4   display model;

5   a window manipulation means configured to receive a command to

6   manipulate the window within the 3D display model, wherein the window

7   provides a 2D user interface for a 2D application; and

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8   wherein in response to the command, the window manipulation means

9   manipulates the window within the 3D display model so that the manipulation is

10   visible within the 2D display.